EmBlitz™
EMBEDDED SYSTEMS

Embedded Starter Kits
Online Courses
Corporate Training
Avx-Hard Real Time OS
Development Boards

ei labz

PRODUCT CATALOG

Visit: www.emblitz.com

SL NO		PAGE NO
1.	Everest Infocom – A journey	3

EMBEDDED STARTER KITS

1.	EMBEDDED STARTER KIT	4
2.	EMBEDDED C KIT	6
3.	EMBEDDED ARM STARTER KIT	8
4.	EMBEDDED PIC STARTER KIT	10
5.	EMBEDDED LINUX LEARNER'S KIT (ARM 9)	13
6.	RTOS LEARNERS KIT	16
7.	VLSI STARTER KIT	18
8.	RFID ARM PROJECT KIT	20
9.	RFID 8051 PROJECT KIT	23
10.	Low Cost ARM Project Board (LPC 2129)	26
11.	Low Cost ARM Project Board (LPC 2148)	28
12.	Embedded Web Server Board (LPC2129)	31
13.	VLSI XILINX KIT	33
14.	USB to Serial Converter	35

ONLINE / DISTANCE CERTIFICATE COURSES

1.	EVAT – EMBEDDED SYSTEMS DESIGN	36
2.	EVAT – EMBEDDED LINUX	43
3.	EVAT – VLSI	49

Everest Infocom – A journey

We are a 7-year old company situated in Bangalore, India with several man-hours of experience in Embedded System Design and Training services.

With our high-level expertise in cutting edge technologies including Embedded Software Development, Real-Time Embedded Systems, Industrial Automation, RFID solutions, Development Boards, etc., we offer product design and development services to companies who are interested to out-source whole or a portion of their design jobs.

We can design microcontroller-based control systems and firmware for a wide range of industries and applications. Our experience includes several designs in the field of Industrial Automation, Real-Time Embedded Systems, Solar Technology, Power Electronics, Mobile Communication and Broadcast Equipments, Bio-Medical Instrumentation, etc.

We also provide training services to corporate entities and academic institutions. Our training syllabus can be customized to meet your requirement/project. Our training faculty have hands-on experience on projects and will be very effective while imparting training as they will be able to share more of their first hand experience with the trainees.

Corporate vision :

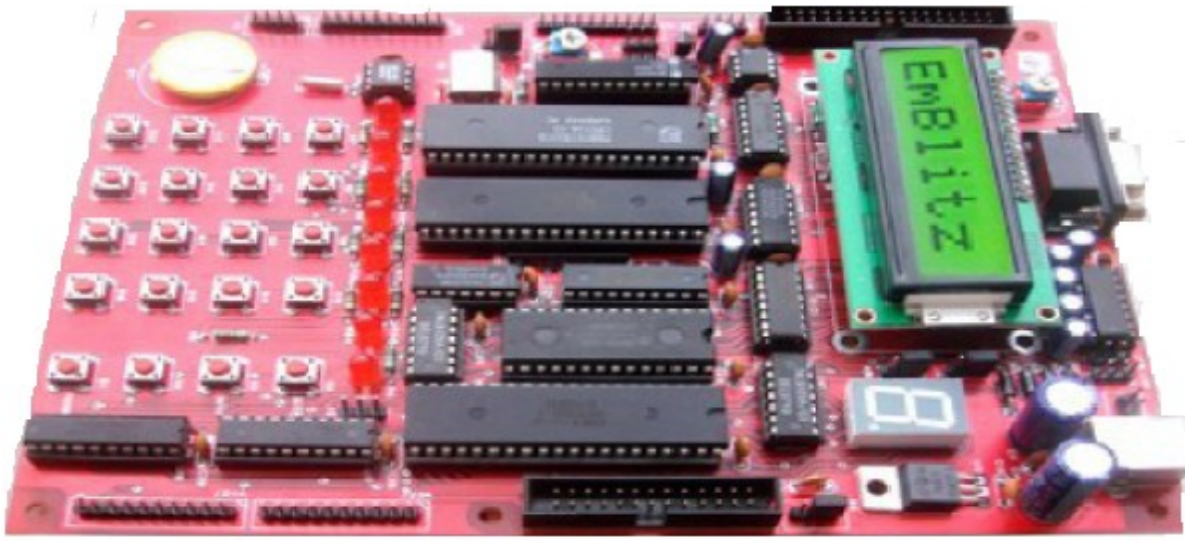
Everest infocom shall be a professionally managed technology company, committed to customer satisfaction and enhancing share holders' value.

Everest infocom shall be innovative, entrepreneurial and proactive company constantly creating value & attaining global quality. Everest infocom shall enforce a culture of trust and continuous learning while meeting the expectation of employees stake holders and society.

Everest infocom believes that a commitment to community welfare and environmental protection constitutes an integral part of the corporate vision.

Embedded 8051 Starter Kit

Product No :Ec 95800



Board Features :

- Processor: 89V51RD2
  64KB Internal flash memory
  1 KB RAM
- 2 x 8255 PPIs
- 1 Serial port(For ISP & Serial communication)
- 16 push buttonswitches
- 1 Seven Segment Display
- 1 LCD module
- 32KB External RAM
- 1 USB connector for power supply
- On-board Real Time Clock
- On-board ADC interfaced to 10K Pot & Temperature sensor
- All peripherals are memory mapped.

Chip Features :

- 5 V Operating voltage from 0 upto 40 MHz frequency.
- 64KB of on-chip Flash memory with ISP (In-System Programming) and IAP (In-Application Programming)
- Supports 12-clock (default) or 6-clock mode selection via software or ISP
- SPI (Serial Peripheral Interface)
- 1 Enhanced UART
- Four 8-bit I/O ports with three high-current Port 1 pins (16 mA each)

· Three 16-bit timers/counters

· Programmable Watchdog timer (WDT)

· Eight interrupt sources with four priority levels

· Second DPTR register

· Low EMI mode (ALE inhibit)

· TTL and CMOS compatible logic levels

· Low power modes Power-down mode with external interrupt wake-up Idle mode

System Requirement:

· Hardware requirements:

. 8051 Starter Kit

. A serial cable, 9 pin male to 9 pin female connector wired one-to-one

. A PC available with RS232 port. If the PC has no serial port then,either

. USB to serial converter or parallel to serial converter is required.

. USB Port for power supply.

· Software requirements:

. UMPS assembler

.Flash Magic

.MS Windows 98/ME or windows NT/2000/2003

Contents of Kit:

· 8051 Evaluation Board

· Serial Cable

· USB cable

· Software CD

· Extra jumpers

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

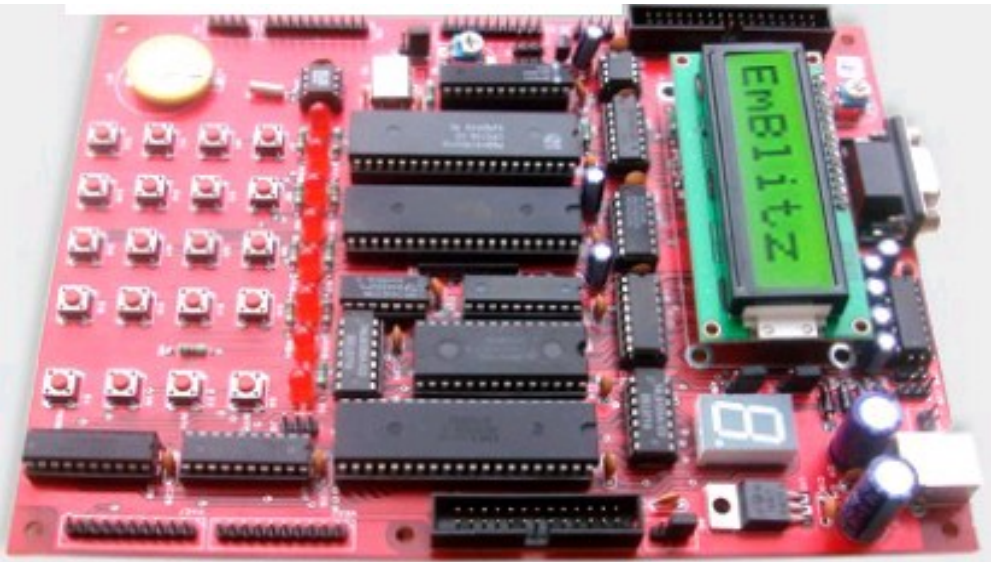
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com

Visit: www.emblitz.com

Embedded C KIT



Product No : Ec 95801
Board Features:

- Processor: 89V51RD2
- 64KB internal flash memory
- 1 KB onchip RAM
- 4 I/O ports
- 1 serial port for both ISP &
- Serial communication
- 2,x8255 connected to 8 LEDs
- 16 push button switches
- 1 Seven Segment Display
- 1 LCD module(16x2 characters)
- 32KB External RAM
- 1 USB connector port for power supply.
- On-board Real Time Clock
- On-board ADC interfaced to temperature sensor and 10K Pot
- All peripherals are memory mapped.

89V51RD2 Chip Features:

- 5 V Operating voltage from 0 upto 40 MHz frequency.
- 64 KB of on-chip Flash program memory with ISP (In-System Programming) and IAP (In-Application Programming)
- Supports 12-clock (default) or 6-clock mode selection via software or ISP
- SPI (Serial Peripheral Interface) and enhanced UART
- PCA (Programmable Counter Array) with PWM and Capture/Compare functionsv

- Four 8-bit I/O ports with three high-current Port 1 pins (16 mA each)
- Three 16-bit timers/counters
- Programmable Watchdog timer (WDT)
- Eight interrupt sources with four priority levels
- UART
- Second DPTR register
- Low EMI mode (ALE inhibit)
- TTL- and CMOS-compatible logic levels
- Low power modes
- Power-down mode with external interrupt wake-up Idle mode.

System Requirement:

Hardware requirements:

- A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us.
- A USB port to provide power supply for the board.

Software requirements:

- MS Windows 98/ME/NT/2000/2003/XP/Vista

Contents of Kit:

- 8051 Evaluation Board
- Serial Cable
- USB cable
- Extra jumpers
- Software CD containing µVision Keil IDE with Tool chain, Flash Programming Utility, Datasheets, User Guide, Quick Start Guide, Schematics, Example codes and Case studies.

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.

#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India

Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229

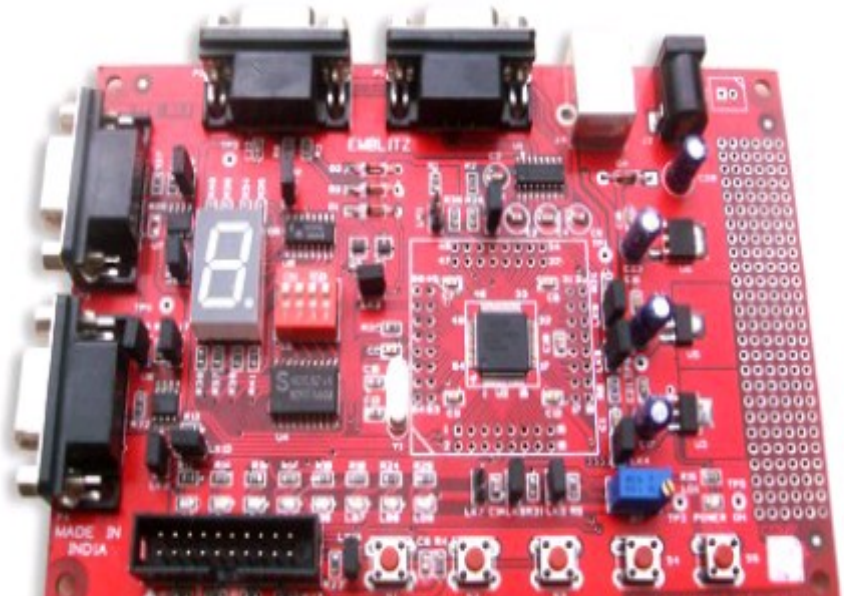
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com

Visit: www.emblitz.com

Embedded ARM RTOS kit with EMBLITZ IDE + AVX RTOS

Product No : Ec 95848



Board Features:

•Processor: LPC2129

•2x serial ports (one for ISP and the other for serial communication)

•2xCAN ports with complete physical layer implementation on board via drivers(MCP2551)

•JTAG Connector header box in 2x10 pin layout provides ARM-JTAG Interface compatibility

•12.00 MHz Crystal

•RESET button

•RESET circuit can be also controlled externally by Philips ISP utility via RS232

•Dual Power supply (either through USB or using external power adapter).

•Eight status LEDs with buffers and chip select

•Four buttons Potentiometer connected to analog input AIN0

•BSL jumper for boot loader enable

•DBG jumper for JTAG enable

•JRST jumper to enable external RESET control by RS232

•One Seven Segment Display with shift register and chip select

•Single power supply: 7V to 9V DC or can be connected to the USB port of the computer

•Power supply status LED

•Three on-board voltage regulators 1.8V, 3.3V and 5V with up to 800mA current

•Extension headers for all µC ports

•On board prototyping area

Package Contents:

•ARM starter Kit Evaluation Board

•JTAG Data Cable (20-pin FRC), Parallel port cable for JTAG, USB Cable, CAN cable

•1 Software CD containing Emblitz IDE, Avx, Example codes, Keil IDE, GNU Toolchain, JTAG debugger, Philips ISP Utility, and all necessary documentation including schematic of the Board, Users Manual for the board, Data Sheets of all ICs used on board and reference manuals 2 Audio/Vedio CDs , introduction to ARM and introduction to Keil. Extra jumpers

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order: http://www.emblitz.com/order.html

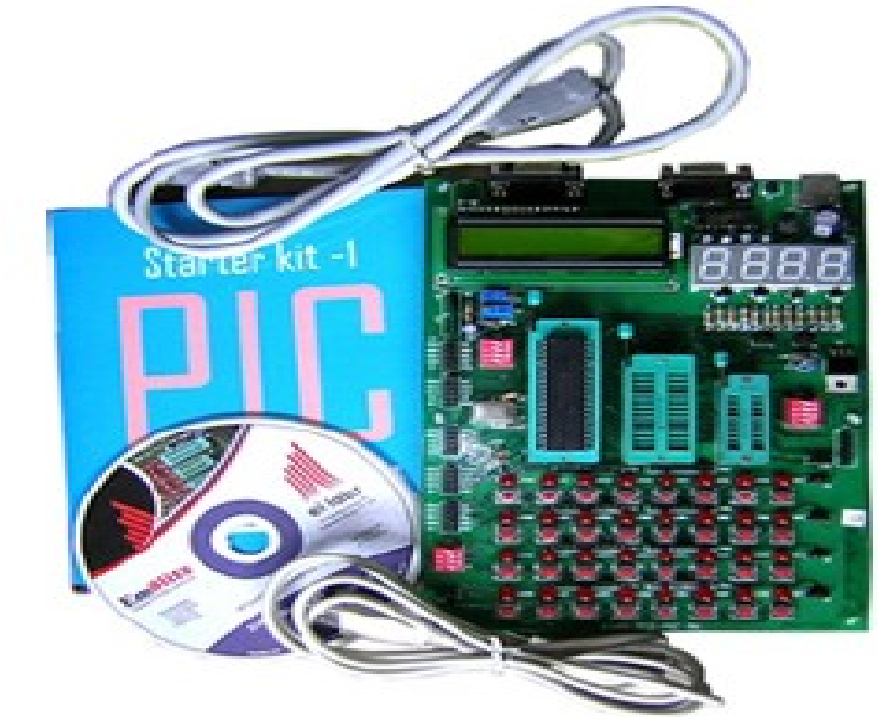
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +9109449104615 +91 09880562847

order@emblitz.com
Visit: www.emblitz.com

Embedded PIC Starter Kit

Product No : Ec95804



Board Features:

- Processor :PIC 16F877A
- On board 3 ZIF Sockets facilitates programmming 40/28/20 pin(16Fxxx and 18Fxxx series) PIC Microcontrollers
- 2x Serial ports(one for ISP & other for RS232
- serialCommunication
- 1 LCD module(16x2 characters)
- 4 Seven segment displays, each unit controlled via Dip Switch
- 32 LED's -each connected to all I/O pins
- 32 Push button switches connected to all I/O pins
- Pin outs for Port extension for users ease
- USB Socket for Power Supply
- Optional DC power supply connector pins
- The System works at +12v when in ISP Mode of operation
- Works efficiently with +5V Power Supply from an AC to DC Adapter or using USB Cable connected to PC

PIC16F77A Chip Features:

- High performance RISC CPU
- Only 35 single-word instructions to learn. All single-cycle instructions except for program branches, which are two-cycle
- Operating speed: DC – 20 MHz clock input
- DC – 200 ns instruction cycle
- Up to 8K x 14 words of Flash Program Memory,
- Up to 368 x 8 bytes of Data Memory (RAM),
- Up to 256 x 8 bytes of EEPROM Data Memory
- Pin-out compatible to other 20-pin/28-pin/40pin PIC16CXXX and PIC18FXXX microcontrollers

Peripheral Features:

- Timer0: 8-bit timer/counter with 8-bit pre-scalar
- Timer1: 16-bit timer/counter with pre-scalar, can be incremented during Sleep via external
- Timer2: 8-bit timer/counter with 8-bit period register, pre-scalar and post-scalar
- Two Capture, Compare, PWM modules
- Capture is 16-bit, max. resolution is 12.5 ns
- Compare is 16-bit, max. resolution is 200 ns
- PWM max. resolution is 10-bit
- Synchronous Serial Port (SSP) with SPI™ (Master mode) and I2C™ (Master/Slave)
- Universal Synchronous Asynchronous Receiver Transmitter (USART/SCI) with 9-bit address
- Parallel Slave Port (PSP) – 8 bits wide with external RD, WR and CS controls (40/44-pin only)
- Brown-out detection circuitry for Brown-out Reset (BOR)

Analog Features:

- 10-bit, up to 10-channel Analog-to-Digital Converter (A/D).
- Brown-out Reset (BOR).
- Analog Comparator module with two analog comparators.
- Programmable on-chip voltage reference (VREF) module.
- Programmable input multiplexing from device inputs and internal voltage reference.
- Comparator outputs are externally accessible.

Special Microcontroller Features:

- 1 00,000 erase/write cycle Enhanced Flash program memory typical
- 1,000,000 erase/write cycle Data EEPROM memory typical
- Data EEPROM Retention > 40 years
- Self-reprogrammable under software control
- In-Circuit Serial Programming™ (ICSP™) via two pins
- Single-supply 5V In-Circuit Serial Programming
- Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
- Programmable code protection
- Power saving Sleep mode

- Selectable oscillator options
- In-Circuit Debug (ICD) via two pins

CMOS Technology

- Low-power, high-speed Flash/EEPROM technology
- Fully static design
- Wide operating voltage range (2.0V to 5.5V)
- Commercial and Industrial temperature ranges
- Low-power consumption

System Requirement:

Hardware requirements:

- A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us.
- A USB port to provide power supply for the board.

Software requirements:

- MS Windows 98/ME/NT/2000/XP/Vista

Kit Contents:

- PIC Starter Evaluation Board
- LCD module (16x2 characters)
- Serial Cable
- USB Cable
- Extra Jumpers
- PIC Starter Kit software CD containing MPLAB IDE, IC Prog Flash Programming Utility, Documentation including User Guide, Quick Start Guide, Schematics, Datasheets, Tutorials and Reference Books, Example codes and Case studies.

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

THE FULL FLEDGED ARM 9 DEVELOPMENT BOARD WITH TOUCH SCREEN DISPLAY MODULE

Board features:

- CPU: Samsung S3C2440A (ARM920T), 400MHz, max. 533MHz
- RAM: 64MByte SDRAM, 32bit Bus, 100MHz Clock
- Flash: 64MByte Nand Flash, 2MByte Nor Flash with Bios
- System Clock: 12Mhz Crystal
- LCD: 4 wire resistive touch screen interface, STN-Displays 4bit dual scan, 4bit single scan or 8bit single scan display type monochrome, 4 gray levels, 16 gray levels, 256 colors or 4096 colors Max: 1024x768 TFT-Display 1, 2, 4 or 8 bpp palletized color displays, 16 or 24 bpp non-palletized true-color displays Max: 1024x768, 64k colors

Interface and Resource:

- 1 10/100M Ethernet RJ-45 (DM9000)
- 3 Serial Ports (1 RS232)
- 1 USB Host
- 1 USB Device
- 1 SD-Card Interface
- 1 Audio Output
- 1 Audio Input
- 1 Microphone
- 4 User LEDs
- 6 User Buttons
- 1 PWM Buzzer
- 1 Adjustable Resistance (for ADC testing)
- 1 I2C EEPROM (24C08)
- 1 Real Time Clock with Battery (RTC)
- 1 20pin Camera Interface (2.0mm)
- 1 10pin JTAG (2.0mm)
- Expansion Interface: 1 34pin GPIO (2.0mm)
- 1 40poin System Bus (2.0mm)
- Power Supply: 5V Connector
- OS Support: Linux 2.6, Windows CE 5
- Display Module: 3.5" / 7" LCD touchscreen display
- QT environment for application development
- GTK support
- Complete source code for boot loader and example application programs

Warranty: one year

Lead time: 3 working days

Pr ice: Please ask for the quotation

How to order: http://www.emblitz.com/order.html

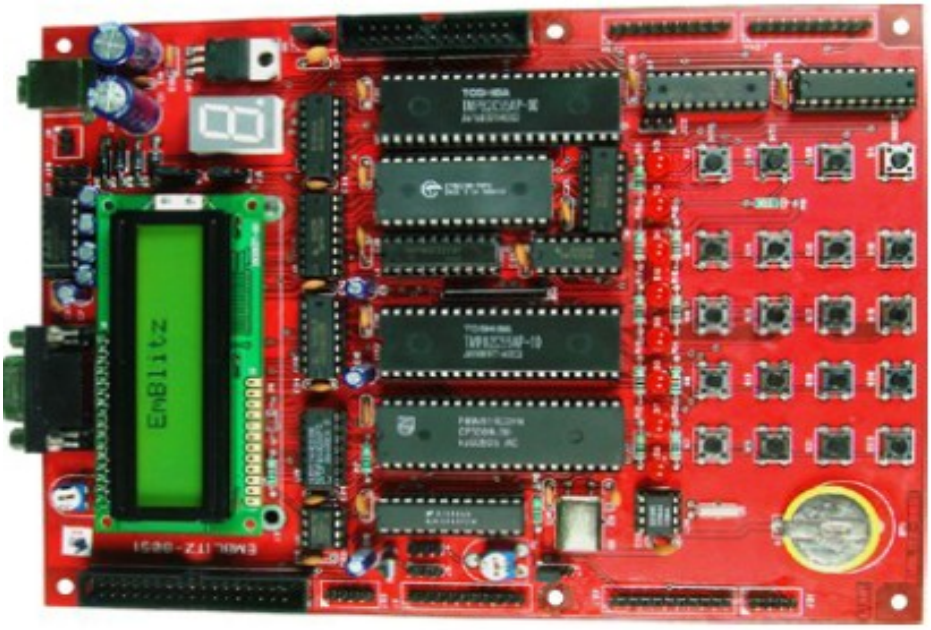
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

Embedded RTOS Learner Kit

Product No:Ec 95822



Features:

- 8KBytesofIn-System Programmable(ISP) Flash Memory
- Endurance:1000Write/Erase Cycles
- On board ISP programmer through PC's serial port.
- 4.0Vto5.5VOperatingRange
- 11.0592MHzCrystal.
- 256x8-bit Internal Ram.
- 512byteI2CEEPROM.
- Real time clock with serial interface capability.
- On board bus expander(8255A).
- On board ADC.
- On board temperature sensor.(LM35)
- On board multi turn pots output to the ADC.(ADC0809)
- Seven channel input to ADC from the external world for sensor
- Interface or any other data collection.
- One board LCD connector with LCD(16x2Line display with back light)and extension wire.
- On board seven segment display.
- Two interrupt switch for debugging purposes.
- Extension header for all the unpins.
- On board power supply regulator require 9to12volt 1ampACinput.
- Power on LED.

- Four status LED with jumper to select it individually.
- PCB:FR-4,1.5mm(0.062"),green solder mask,
- white silkscreen component print.
- Three16-bit Timer/Counters.
- Eight Interrupt Sources.
- Full Duplex UART Serial Channel with MAX232andDB9 connector.
- Low-power Idle and Power-down Modes.
- Interrupt Recovery from Power-down Mode.
- Watchdog Timer.
- Dual Data Pointer.
- Power-off Flag.

Kit Containing:

- 16x2 Line LCD with extended connector
- Power supply
- RS232connectingcable
- One CD containing software,examples and learn yourself Lab manual

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

VLSI STARTER KIT

Product No : Ec 95824

Kit Features:

- 100,000 gate Xilinx Spartan 3E FPGA
- JTAG programming port
- XCF04S Xilinx Platform Flash ROM to store FPGA configurations
- Large collection of I/Os including eight LEDs and four slide switches
- LCD and 7 segment displays
- RS 232 and VGA ports
- Ethernet port with physical layer controller
- User-selectable oscillator , plus a socket for a second oscillator
- 100 pin user I/O and peripheral module connection

FPGA Features:

- 100k gates
- 108 I/OS
- 72k Block RAM
- 15k Distributed RAM
- 240 CLBs

Contents of Kit:

- VLSI kit
- USB cable
- TAG cable
- Parallel port cable
- LCD module
- Supplied DVD containing software (Xilinx ISE), Example codes, Schematics, Connection diagram, Data
- Sheets ,User Manual and other details to use the product.

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

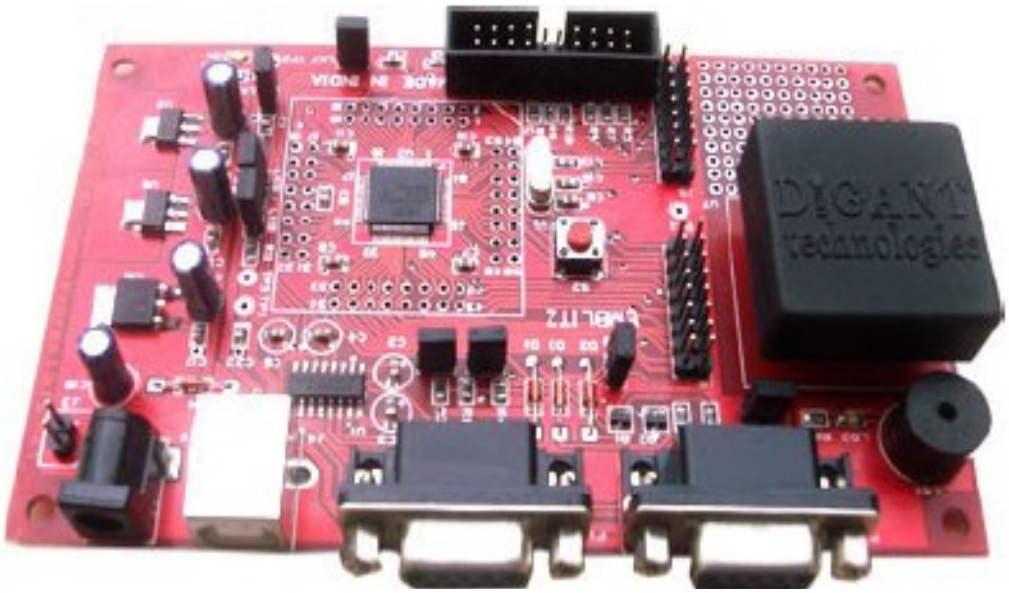
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

ARM-BASED RFID PROJECT KIT

Product No : Ec 95825



Board Features

- Processor: LPC2129
- 2xSerial ports(One for ISP and other for Serial Communication)
- 12.00 MHz crystal
- Inbuilt Reset Circuit with a switch on board
- RESET circuit can be controlled externally by Philips ISP utility via RS232
- Dual Power supply (either through USB or using external power adapter)
- Status LED for power supply
- Three on-board voltage regulators 1.8V, 3.3V and 5V with up to 800mA current Extension headers for all µC ports PCB
- 32 bit general purpose I/O pins(P0.8-P23 & P1.16-P1.31) are connected to external Connectors to facilitate easy system expansion
- On-board RFID Reader Module with built-in antenna in minimized form factor, designed to work on the industry standard carrier frequency of 125 kHz
- Buzzer for audible indication
- A prototyping area is provided for interfacing the controller chip to any of the small peripherals mentioned below:
  - LCD Interfaces
  - LED Interface
  - 7 segment display
  - Matrix Keyboard Interface
  - Stepper Motor Interface
  - CAN Ports

LPC2129 Chip Features:

· 16/32-bit ARM7TDMI-S microcontroller
· 16 kB on-chip RAM,256 kB Flash Program Memory supports upto 60 MHz frequency
· In-System Programming (ISP) and In-Application Programming (IAP) via on-chip boot- loader software
· On-chip Embedded-ICE-RT, Embedded Trace Macrocell debugger
· Two interconnected CAN interfaces with advanced acceptance filters
· Four channel 10-bit A/D converter with conversion time as low as 2.44 ms
· Multiple serial interfaces including two UARTs (16C550)
· Fast I2C (400 kbits/s) and two SPIs
· Phase-Locked Loop with settling time of 100 ms
· Vectored Interrupt Controller with configurable priorities and vector addresses
· Two 32-bit timers (with four capture and four compare channels), PWM unit (six outputs) Real Time Clock and Watchdog
· Up to forty-six 5V tolerant general purpose I/O pins
· Up to nine edge or level sensitive external interrupt pins available
· On-chip crystal oscillator with an operating range of 1 MHz to 30 MHz
· Two low power modes: Idle and Power-down
· Processor wake-up from Power-down mode via external interrupt
· Individual enable/disable of peripheral functions for power optimization
· CPU operating voltage range of 1.65V to 1.95V(1.8 V ±0.15 V)
· I/O power supply range of 3.0 V to 3.6 V (3.3 V ± 10 %) with 5 V tolerant I/O pads

System Requirement:

Hardware requirements:

· A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us
· A USB port to provide power supply for the board

Software requirements:

· MS Windows 98/ME/NT/2000/2003/XP/Vista

Contents of Kit:

- RFID-ARM Project Board
- JTAG Wiggler with 20 pin data cable
- USB cable
- Serial cable
- Parallel cable
- 1 Software CD containing µVision Keil IDE, GNU Toolchain, JTAG debugger, Philips ISP Utility, all necessary documentation including Schematic of the Board, User Guide for the board, Quick Start Guide, Data Sheets, and reference manuals,Example codes and Case Studies
- 10 Nos.of RFID Tags
- Extra jumpers

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

8051-BASED RFID PROJECT KIT

Product No : Ec95826

Board Features:

- Processor: 89V51RD2
- 64KB internal flash memory
- 1 KB on chip RAM
- 4 I/O ports
- 1 serial port for both ISP and Serial communication
- 2x8255 connected to 8 LEDs
- 16 push button switches
- 1 Seven Segment Display
- 1 LCD module(16x2 characters)
- 32KB External RAM
- 1 USB connector port for power supply
- On-board Real Time Clock
- On-board ADC interfaced to temperature sensor and 10K Pot
- All peripherals are memory mapped
- Add-on board provided with RFID Reader module having built-in antenna in minimized form factor, designed to work on the industry standard carrier frequency of 125 kHz

• On-board buzzer provided for audible indication

Chip Features:

• 5 V Operating voltage from 0 upto 40 MHz frequency
• 64 KB of on-chip Flash program memory with ISP (In-System Programming) and IAP (In- Application Programming)
• Supports 12-clock (default) or 6-clock mode selection via software or ISP
• SPI (Serial Peripheral Interface) and enhanced UART
• PCA (Programmable Counter Array) with PWM and Capture/Compare functions
• Four 8-bit I/O ports with three high-current Port 1 pins (16 mA each)
• Three 16-bit timers/counters
• Programmable Watchdog timer (WDT)
• Eight interrupt sources with four priority levels
• UART
• Second DPTR register
• Low EMI mode (ALE inhibit)
• TTL- and CMOS-compatible logic levels
• Low power modes Power-down mode with external interrupt wake-up Idle mode

System Requirements:

Hardware requirements:

• A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us
• A USB port to provide power supply for the board.

Software requirements:

· MS Windows 98/ME/NT/2000/2003/XP/Vista

Contents of Kit:

- 8051 Evaluation Board
- Serial Cable
- USB cable
- RFID Sensor based ADD-ON card.
- Connecting cable for RFID module.
- 10 Nos. of RFID Tags
- Extra jumpers
- Software CD containing µVision Keil IDE with Tool chain, Flash Programming Utility, Data sheets, User Guide, Quick Start Guide, Schematics, Example codes and Case studies

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

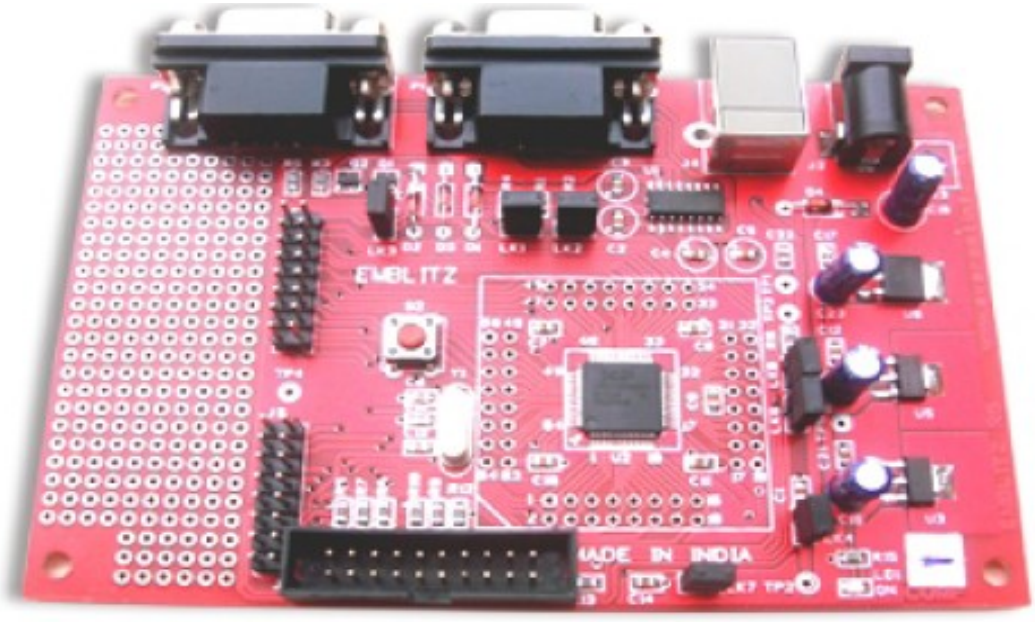
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

Low Cost Embedded ARM Project KIT (LPC 2129)

Product No : Ec 95827



Board Features :

- Processor: LPC2129
- 2xSerial ports(One for ISP and other for Serial Communication)
- 12.00 MHz crystal
- Inbuilt Reset Circuit with a switch on board.
- RESET circuit can be controlled externally by Philips ISP utility via RS232.
- Dual Power supply (either through USB or using external power adapter).
- Status LED for power supply.
- Three on-board voltage regulators 1.8V, 3.3V and 5V with up to 800mA current Extension headers for all µC ports PCB
- 32 bit general purpose I/O pins(P0.8-P23 & P1.16-P1.31) are connected to external Connectors to to facilitate easy system expansion.
- A prototyping area is provided for interfacing the controller chip to any of the small peripherals mentioned below:
    - LCD Interfaces
    - 7 segment display.
    - Matrix Keyboard Interface.
    - Stepper Motor Interface.
    - CAN Ports.

System Requirement:

Hardware requirements:

- A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us

· A USB port to provide power supply for the board.

Software requirements:

· MS Windows 98/ME/NT/2000/2003/XP/Vista

Contents of Kit:

· Low Cost Embedded ARM Project Board

· USB cable

· Serial cable

· JTAG Wiggler with 20 pin data cable

· Extra jumpers

· 1 Software CD containing µVision Keil IDE, GNU Toolchain, JTAG debugger, Philips ISP Utility, all necessary documentation including Schematic of the Board, User Guide for the board, Quick Start Guide, Data Sheets, and reference manuals, Example codes and Case Studies.

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order: http://www.emblitz.com/order.html

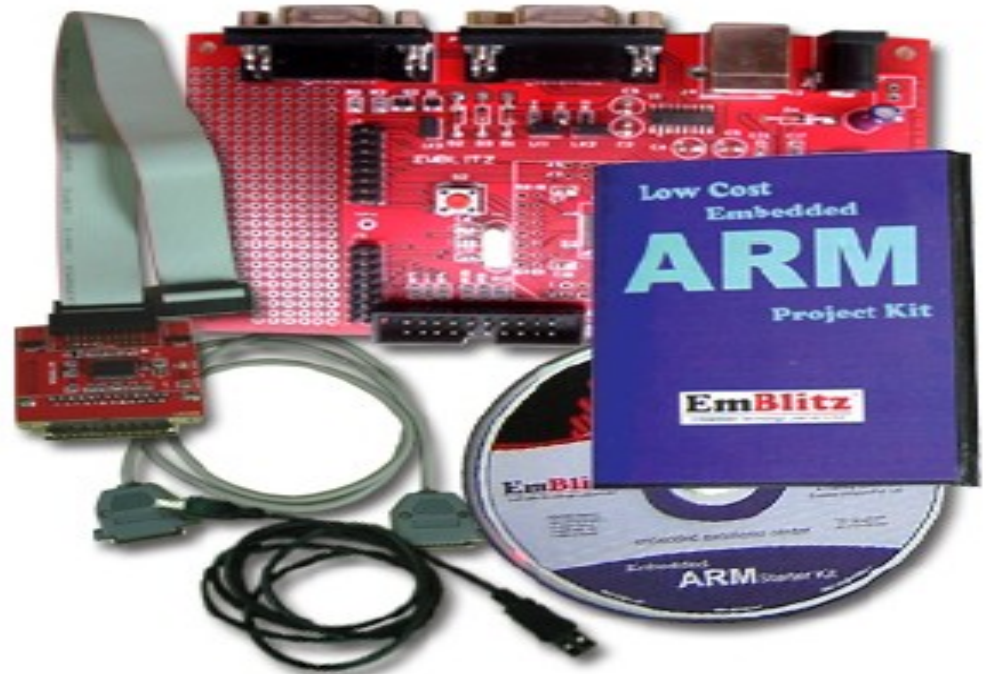
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09880562847

order@emblitz.com
Visit: www.emblitz.com

Low Cost Embedded ARM Project KIT (LPC 2148)

Product No : Ec 95835



Board Features :

- Processor: LPC2148
- 2xSerial ports(One for ISP and other for Serial Communication)
- 12.00 MHz crystal
- Inbuilt Reset Circuit with a switch on board
- RESET circuit can be controlled externally by Philips ISP utility via RS232
- Dual Power supply (either through USB or using external power adapter)
- Status LED for power supply
- Three on-board voltage regulators 1.8V, 3.3V and 5V with up to 800mA current Extension headers for all µC ports PCB
- 32 bit general purpose I/O pins(P0.8-P23 & P1.16-P1.31) are connected to external Connectors to to facilitate easy system expansion
- A prototyping area is provided for interfacing the controller chip to any of the small peripherals mentioned below:
    - LCD Interfaces
    - 7 segment display
    - Matrix Keyboard Interface
    - Stepper Motor Interface
    - USB Ports

LPC2148 Chip Features:

- 16/32-bit ARM7TDMI-S microcontroller
- 16 kB on-chip RAM,256 kB Flash Program Memory supports upto 60 MHz frequency
- In-System Programming (ISP) and In-Application Programming (IAP) via on-chip boot loader software
- On-chip Embedded-ICE-RT, Embedded Trace Macro cell debugger
- Two interconnected CAN interfaces with advanced acceptance filters
- Four channel 10-bit A/D converter with conversion time as low as 2.44 ms
- Multiple serial interfaces including two UARTs (16C550),
- Fast I2C (400 kbits/s) and two SPIs
- Phase-Locked Loop with settling time of 100 ms
- Vectored Interrupt Controller with configurable priorities and vector addresses
- Two 32-bit timers (with four capture and four compare channels), PWM unit (six outputs), Real Time Clock and Watchdog
- Up to forty-six 5V tolerant general purpose I/O pins
- Up to nine edge or level sensitive external interrupt pins available
- On-chip crystal oscillator with an operating range of 1 MHz to 30 MHz
- Two low power modes: Idle and Power-down
- Processor wake-up from Power-down mode via external interrupt
- Individual enable/disable of peripheral functions for power optimization
- CPU operating voltage range of 1.65V to 1.95V(1.8 V ±0.15 V)
- I/O power supply range of 3.0 V to 3.6 V (3.3 V ± 10 %) with 5 V tolerant I/O pads

System Requirement:

Hardware requirements:

- A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us
- A USB port to provide power supply for the board

Software requirements:

- MS Windows 98/ME/NT/2000/2003/XP/Vista

Contents of Kit:

- Low Cost Embedded ARM Project Board
- USB cable
- Serial cable
- JTAG Wiggler with 20 pin data cable
- Extra jumpers
- 1 Software CD containing µVision Keil IDE, GNU Toolchain, JTAG debugger, Philips ISP Utility, all necessary documentation including Schematic of the Board, User Guide for the board, Quick Start Guide, Data Sheets, and reference manuals, Example codes and Case Studies

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

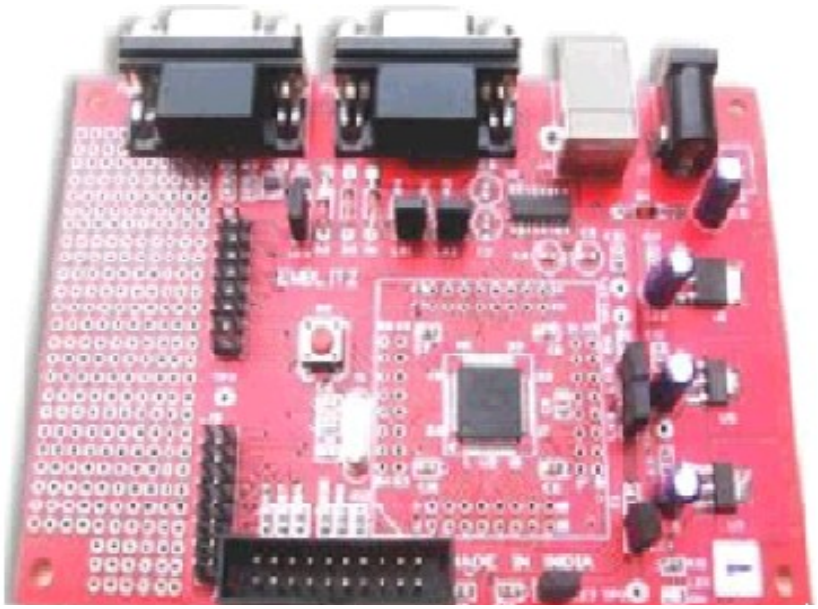
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

Embedded Web Server Board (LPC2129)

Product Code: EC95957



Board Features :

- Processor: LPC2129
- 2xSerial ports(One for ISP and other for Serial Communication)
- 12.00 MHz crystal
- Inbuilt Reset Circuit with a switch on board
- RESET circuit can be controlled externally by Philip's ISP utility via RS232
- Dual Power supply (either through USB or using external power adapter)
- Status LED for power supply
- Three on-board voltage regulators 1.8V, 3.3V and 5V with up to 800mA current Extension headers for all µC ports PCB
- 32 bit general purpose I/O pins(P0.8-P23 & P1.16-P1.31) are connected to external Connectors to to facilitate easy system expansion
- A prototyping area is provided for interfacing the controller chip to any of the small peripherals mentioned below:
- LCD Interfaces
- 7 segment display
- Matrix Keyboard Interface
- Stepper Motor Interface
- CAN Ports
- Ethernet Port

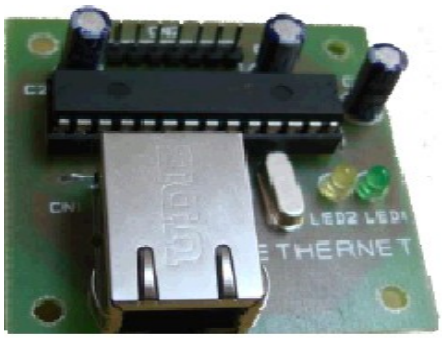
System Requirement:

Hardware requirements:

- A PC with serial (RS232) port. If serial port is not available, a USB to serial converter (Ec95829) can be purchased from us.
- A USB port to provide power supply for the board.

Software requirements:

- MS Windows 98/ME/NT/2000/2003/XP/Vista



Contents of Kit:

- Embedded ARM Web Server Board, USB cable
- Serial cable
- JTAG Wiggler with 20 pin data cable, Ethernet Cable
- Extra jumpers
- 1 Software DVD containing µVision Keil IDE, GNU Toolchain, JTAG debugger, Philips ISPUtility, all necessary documentation including Schematic of the Board, User Guide for the board, Quick Start Guide, Data Sheets, and reference manuals, Example codesand Case Studies.

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

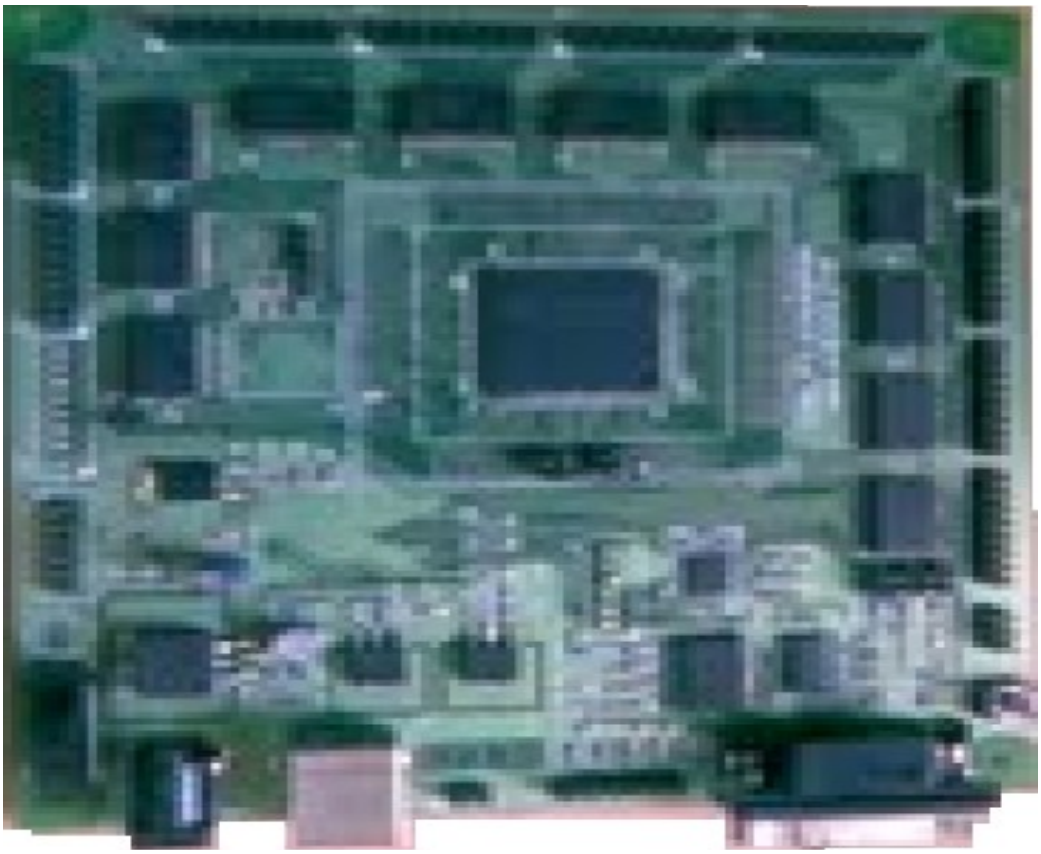
Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

VLSI XILINX KIT

EC95954



Kit Features:

·XC3S250E processor

·250,000 gate Xilinx Spartan3E FPGA

· JTAG programming port;

· XCF04S Xilinx Platform Flash ROM to store FPGA configurations;

·large i/o

·RS232 port

·more than 100 pin user I/O and peripheral module connection

FPGA Features:

·250K gates.

· 108 I/Os

· 72k Block RAM

· 15k Distributed RAM

· 240 CLBs

Contents of Kit:

- VLSI kit
- USB cable
- JTAG cable
- Parallel port cable
- Supplied DVD containing software (Xilinx ISE),Example codes, Schematics,Connection diagram,Data Sheets,user manual and other details to use the product

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

USB to Serial Converter

Features :

· The Emblitz USB-Serial Converter provides a simple and easy way to convert Universal Serial Bus (USB) into a Serial Port (COM Port). It is specially designed for using with EmBlitz Starter Boards which require to be connected to a serial port for ISP Programming/Serial Communication.

· It is ideal for use in laptops which do not have serial port (COM Port).

· It can also be used in Desktop PCs where the existing Serial Port is already in use for any other application.

· A CD containing the drivers for installation is provided with the USB-Serial Converter.

· System Requirements :

· Win 2K/XP/Vista/Linux

Warranty: one year

Lead time: 3 working days

Price: Please contact us.

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com

Visit: www.emblitz.com

EVAT (Emblitz Varsity Associate Trainee) Program

Embedded Systems Design

Product No : EVAT 01

This fully interactive self study course of embedded system design teaches the basic concepts of embedded system. The course is recommended for all individuals who wants to learn embedded from scratch. EVAT (Emblitz Varsity Associate Trainee) program is a 25 days course that will take approximately 70 hours to complete. It is divided into 10 lessons. It includes one copy of the training work book, a course Guide and 14 CDs with video classroom, a Reference book, and a 8051 based hardware kit with your complete course registration.

Your 5 comprehensive modules start with solid basics. You'll begin by learning the important principles that are the fundamental rules for just about whatever you may do in embedded system design. Then, you'll get detailed instructions in techniques and procedures. Step by step, we'll guide you through exciting hands-on projects that you can complete at your kitchen table.

Academia, amateurs, professionals and research labs across the India and around the world would appreciate the kinds of technical skills we teach. There are no educational prerequisites to enroll. However, you should be familiar with basic electronics, and comfortable with fundamentals.

VIDEO CD – 1

- Introduction of Embedded System.
- Real time Examples of Embedded System.
- Design cycle of an Embedded System.
- Real time and non real time concepts.

• Trends & Market Scenario.
• A detailed example of an Embedded System (Thermostat).
• Embedded Application Programming.
• Different types of processor with example
• (GPS system, Match Box PC Palm Top etc.).

VIDEO CD – 2

• Introduction to Micro controller.
• Difference between Micro controller and Microprocessor.
• Introduction to MC51 Micro controller.
• Architecture of 8051.
a) Memory Architecture.
b) Addressing mode.
c) Special Function Registers.
d) Pin Description of 8051.
e) Additional features.

• Writing program in Assembly language
a) What is an IDE?
b) Demo of UMPS
i) Writing program
ii) Assembling
iii) Connecting Peripherals
iv) Simulation & Debugging
v) Generating an image (hex file)

VIDEO CD - 3

• Detail Description of All special function Register
a) Timer
b) Serial Communication
c) Interrupts

• Instruction sets in 8051
a) Data Transfer
b) Arithmetic Operation
c) Logical Operator
d) Bit operation
e) Branching Instruction.

VIDEO CD - 4

• Introduction to Embedded C Language

a) Why Embedded C?

b) What is the use of Embedded C?

• Introduction of Cross Compiler

a) Compiler

b) Assembler

c) Linker

d) Loader

e) Memory

• Trade off between using C for desktop & embedded system.

VIDEO CD - 5 and 6

• Embedded C Programming

a) Special keywords in Embedded C

b) Introduction of KEIL software

c) Demo of Keil Software

i. Creating projects

ii. Writing C Program

iii. Compiling, Debugging

v. Generating hex file.

d) Memory mapping of 8051

e) Interfacing External memory

f) Memory specifies.

• Memory models

• An demo of all the keywords used in Keil.

• Different Cross Compilers in Market.

• Introduction to Keil software.

VIDEO CD - 7

• Embedded Communication Protocols

a) Parallel Communication.

b) Serial Communication.

i. Asynchronous Communication.

ii. Synchronous Communication.

VIDEO CD - 8

• Introduction of I2C Protocol I2C Protocol I2C Implementation A Real time example using IC DS1302.

VIDEO CD - 9

• Introduction to SPI Protocol

a. SPI Protocols

b. Implementation

c. Example of SPI Protocol

• Test Communication protocol.

VIDEO CD - 10

• Concepts of Operating System

a. What is an Operating System?

b. What makes an Operating System?

c. Types of Operating System.

• Concepts of Real Time Operating System

• Difference between RTOS & Other OS

• An Example of RTOS

VIDEO CD - 11

• Tasks. Multi Tasking

• Process.

• Threads.

• How scheduler works Scheduling algorithms.

• Types of Schedulers.

• Scheduling in VX-Works, UCOS.

• Graff chart concepts

VIDEO CD - 12

• Semaphores

a. Binary semaphore

b. Counting Semaphore

c. Mutex Semaphore

• Shared Memory

• Message Q s.

• Notation used.

VIDEO CD -13

• Introduction to ARM Processor.

• Difference between RISC & CISC Machines

• Memory Architecture

a) Von-Neumann Architecture

b) Harvard Architecture

- Microprocessor & Micro controllers
- Difference between Microprocessor & Micro controllers
- 8 bit Microprocessor & Micro controllers
- 16 bit Microprocessor & Micro controllers
- 32 bit Microprocessor & Micro controllers
- How 32 bit uP on uC is better?

VIDEO CD – 14

- The ARM Processor: The ARM Ltd.
  ARM, the 32 bit Architecture States of operations 7 Modes of operations ARM Register Sets
- Instruction sets Condition post fixes Data movement Instructions Arithmetic Instructions Logical Instructions
  Multiplication Instructions Load / store instructions Branch Instructions Thumb Instruction set with examples
- ARM 7 TDMI

LAB – CD

1. Schematics of the Board.
2. Quick start & detailed manual (PDF)
3. Example programs
4. 8051 IDE & Flash magic programmer
5. Data Sheets of all IC's used on Board
6. 8051 tutorials

Board Features:

- Processor: 89V51RD2.
- 64KB internal flash memory.
- 1 KB onchip RAM.
- 4 I/O ports.
- 1 serial port for both ISP & Serial communication.
- 2x8255 connected to 8 LEDs.
- 16 push button switches.
- 1 Seven Segment Display.
- 1 LCD module(16x2 characters)
- 32KB External RAM.
- 1 USB connector port for power supply.
- On-board Real Time Clock.
- On-board ADC interfaced to temperature sensor and 10K Pot
- All peripherals are memory mapped.

89V51RD2 Chip Features:

- 5 V Operating voltage from 0 upto 40 Mhz frequency.
- 64 KB of on-chip Flash program memory with ISP (In-System Programming) and IAP (In-Application Programming).
- Supports 12-clock (default) or 6-clock mode selection via software or ISP.
- SPI (Serial Peripheral Interface) and enhanced UART.
- PCA (Programmable Counter Array) with PWM and Capture/Compare functions.
- Four 8-bit I/O ports with three high-current Port 1 pins (16 mA each).
- Three 16-bit timers/counters.
- Programmable Watchdog timer (WDT).
- Eight interrupt sources with four priority levels.
- UART.
- Second DPTR register.
- Low EMI mode (ALE inhibit).
- TTL- and CMOS-compatible logic levels.
- Low power modes:
- Power-down mode with external interrupt wake-up Idle mode

System Requirement:

Hardware requirements:

- A PC with serial (RS232) port. If serial port is not available , a USB to serial converter (Ec95829) can be purchased from us.
- A USB port to provide power supply for the board.

Software requirements:

- MS Windows 98/ME/NT/2000/2003/XP/Vista

Contents of Kit

- Training Work Book
- Evaluation board (8051 based)
- Serial Cable
- USB Cable
- Jumpers
- 15 Video Session CD's
- 1 Lab CD
- EVAT Text Book

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

EVAT (Emblitz Varsity Associate Trainee) Program

Embedded Linux

Product No : EVAT 333

Our 5 comprehensive modules start with solid basics. You'll begin by learning the important principles that are the fundamental rules for just about whatever you may do in world of Linux Application Programming. Then, you'll get detailed instruction in techniques and procedures. Step by step, we'll guide you through Application Programming to the world of exciting Kernel Programming with hands-on detailed practical examples that you can complete at your kitchen table.

Academia, amateurs, professionals and research labs across the India and around the world would appreciate the kinds of technical skills we teach.There are no educational prerequisites to enroll.However, you should be familiar with basic electronics, and comfortable with fundamentals.

THE LINUX PROGRAMMING TOOLKIT

VIDEO CD - 1

1. Overview
• Linux kernel architecture
2. Using GNU cc
• Features of GNU cc
• Common Command-line Options
• Library and Include Files
3.Building Software with GNU Make
• Compiling C
• Basic Makefile

- Makefile Constructs
- Dependency Tracking
- Chip manufacturing processes
- MOS technology trends

VIDEO CD – 2

4. Shell Programming

- An Introduction to Bash Scripting
- User Variables and Environmental Variables
- Arithmetic in Bash
- Tests, Conditionals, and Loops in Bash
- Script Input and Output

5. Debugging: GNU gdb

- Examining core files
- Displaying a backtrace
- Setting a breakpoint
- Stepping through the program
- Modifying variables
- Continuing execution

VIDEO CD - 3

1. Process Control

- System Calls and Library Functions
- The fork() System Call
- The exec() Family
- The system()
- The clone() Function Call
- The wait(), waitpid()
- System Calls
- select()
- Signals
- Program Terminatiom
- Alarms and Timers

VIDEO CD - 4

2. I/O Routines

- File Descriptors
- Calls That Use File Descriptors
- The open() Call
- The close() Call
- The read() Call

- The write() Call
- The fcntl() , IOCTL() Call
- The lseek() Call
- The dup() and dup2() Calls
- The select() Call
- Types of Files
- Regular Files

3. File Manipulation
- The File Functions
- Opening and Closing Files
- Basic Reading and Writing
- Status Functions
- Formatted Output
- Formatted Input
- Character and Line Based Input and Output
- File Positioning
- Buffer Control

VIDEO CD - 5

4. Memory Management
- Reviewing C Memory
- Management
- Using the malloc() Function
- Using the calloc() Function
- Using the realloc() Function
- Using the free() Function
- Using the alloca() Function
- Memory Mapping Files
- Using the mmap() Function
- Using the munmap() Function
- Using the msync() Function
- Using the mprotect() Function

INTERPROCESS COMMUNICATION

VIDEO CD - 6

1. Introduction to IPC: Using Pipes
- Pipes
- "These pipes are clean!"
- fork() and pipe()—you have the power!
- The search for Pipe as we know it

- Communicating Through Pipes
- Command-line Creation and Use of Pipes
- FIFO

VIDEO CD - 7

2. Message Queues

- Sending to the queue
- Receiving from the queue
- Destroying a message queue
- Sample programs

VIDEO CD - 8

3. Shared Memory

- Creating the segment and connecting
- Attach me—getting a pointer to the segment
- Reading and Writing
- Detaching from and deleting segments

VIDEO CD - 9

4. Semaphores

- Grabbing some semaphores
- Controlling your semaphores with semctl()
- semop(): Atomic power!
- Destroying a semaphore
- Sample programs

KERNEL PROGRAMMING

VIDEO CD - 10

1. Modules Programming

- Kernel Modules Versus Applications The Hello World Module
- Compiling and Loading Modules
- Module Parameter
- Doing It in User Space
- Char Drivers
- Major and Minor Numbers
- Some Important Data Structures
- Char Device Registration
- open and release
- read and write

VIDEO CD - 11

2. Debugging Techniques

- Debugging Support in the Kernel
- Debugging by Printing
- Debugging by Querying
- Debugging by Watching
- Debugging System Faults

3. Block Drivers

- Registration
- The Block Device Operations
- Request Processing
- Some Other Details

EMBEDDED LINUX

VIDEO CD - 12

- Developing and running application on Embedded Linux

Hardware:

- PXA-255 (400 MHz processor)
- 64 MB SDRAM
- 64 MB Flash
- 2 audio ports - 1 earphone & 1 microphone
- 2 USB Ports - 1 USB Host and 1 Slave
- 1 Ethernet
- 1 RS-232 Port (Serial)
- PC104 Interface
- Battery Management Unit
- Provision to connect LCD & Touchscreen
- 5 V DC Power Adapter provided for power supply (Optional)
- 5.6" TFT display with Touch Screen

Peripherals Supported:

- USB Mouse
- USB Keyboard
- USB Memory Device

Software:

- Bootloader - image only
- Linux (Kernel 2.4/2.6) with source code
- File System - rootfs images with source code

• Common peripheral drivers with source code

Documentation:

User guide

• Developer's guide

• Programming guide for examples

• Textbook on Embedded ARM

• ARMv5TE Architecture Reference Manual

Development Tools:

• GNU Toolchain

• GDB for debugging applications

• TFTP supported bootloader

• Examples for Application and Kernel Development

• Toolchain for kernel compilation

• Flash Programmer (optional)

• Case study Project

Contents of Kit:

• PXA255 Board

• Add-on Card

• Power Adapter

• Ethernet Cable

• USB Cable

• RS232 Cable

• 1 Linux Kit

• VIDEO CD's

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com

EVAT (EmBlitz Varsity Associate Trainee) Program – VLSI Design (VERILOG)

Product No : EVAT 111

Very-large-scale integration (VLSI) is the process of creating integrated circuits by combining thousands of transistor-based circuits into a single chip. Our Training is based on FPGA design flow with xilinx tools. This program will help you to design Complex digital systems using HDL and also to get experience of Processor and controller implementations on FPGAs.

Your 8 comprehensive modules start with solid basics. You'll begin by learning the important principles that are the fundamental rules for just about whatever you may do in VLSI design. Then,you'll get detailed instruction in techniques and procedures. Step by step, we'll guide you through exciting hands-on projects like Processor implementation on FPGAthat you can complete at your kitchen table.

VIDEO CD - 1

1. Introduction to VLSI design

- VLSI definition
- Why VLSI needed
- What is a Silicon chip
- Silicon Die and Layout
- Classification of Chip based on Fabrication
- Process technologies
- Chip manufacturing processes

• MOS technology trends
• VLSI products
• Scope of VLSI – different Domains and Fields
• Challenges and trends – power, speed and area

2. Basic Digital Design

• Arithmetic circuits
a) Half Adder
b) Full Adder
c) Binary Adder /Subtracter
d) Multiplier

• Sequential and Combinational circuits
a) Encoder and Decoder
b) Multiplexer and De multiplexer
c) Flip-Flop and Latches
d) D ff,JK ff, T ff
e) Registers and Counters

• State machines
a) State diagram
b) Moore machine
c) Mealy machine

• Digital design issues
a) Metastability
b) Setup and Hold Time
c) Clock skew

VIDEO CD – 2 ,3 &4

3. Verilog HDL- 1995 and 2001 verilog

• Introduction to HDL
• Different HDL comparison-
VHDL,Verilog,System Verilog, System C
• Verilog Program structure
• Different Style of modeling
a) Structural style
b) Data Flow style
c) Behavioral style
• Data types
a) Net type

b) Reg type

• Operators
• Compiler directives
• Blocking and Non Blocking Statements
• User Defined Primitives
• Timing Control Statements
a) Delay
b) Event control
c) Wait

• Conditional Statements
a) if and if – else statement
b) case statement

• Looping Statements
a) for loop
b) while loop
c) forever loop
d) repeat

• Functions and Task
a) User functions and tasks
b) System tasks

• Memory modeling
a) RAM modeling
b) ROM modeling

• Reset modeling
a) Synchronous Modeling
b) Asynchronous Modeling

• Test bench modeling
a) Mux Modeling and testing
b) Counter modeling and testing

• 2001 Verilog features
a) Combined port and data type
b) ANSI style of port declarations
c) Combinational sensitivity token

d) Comma separator for sensitivity list

e) Power Operator

f) Signed Data types

g) Multidimensional array

• Generate Loop

VIDEO CD - 5

4. How to Use Modelsim for Design HDL and Simulation

• Basic designs modeling using Modelsim- Basic gates and Counter

• Compiling the design

• Simulation of Design using Modelsim

a) Assigning inputs and clock

b) Generate wave form and collect the output

VIDEO CD - 6

5. Programmable devices

• CPLD , FPGAs, more about xilinx FPGAs

• Programmable Logic and technologies

• PLA and PAL

• CPLD Architecture

• FPGA Architecture

• Xilinx FPGA architecture

• Xilinx Spartan FPGA

VIDEO CD - 7 and 8

6. FPGA Design Flow

• Steps in Design Flow

• Device Programming

• Xilinx FPGA programming through JTAG

7. How to make and implement a Design Using Xilinx ISE

• Basic HDL coding

• Basic gates, Flip Flop and counter

• Verilog HDL synthesis

a) Basic gates, Flip Flop and counter

• Implement the design and generate bit file

a) Basic gates, Flip Flop and counter

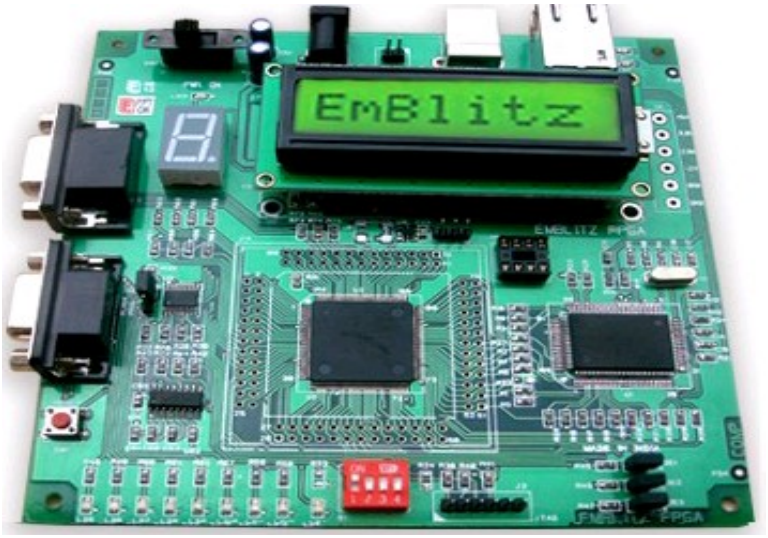
• Generate PROM file

a) Download the configuration file in to FPGA using xilinx Impact Connect JTAG cable Initialize JTAG chain and detect FPGA part number Program the FPGA

8. Implementation of 8 bit Picoblaze Processor in Xilinx FPGA

• Study of Picoblaze processor architecture

• Features and Instruction set of Picoblaze



Board Features:

• 100,000 gate Xilinx Spartan 3E FPGA

• JTAG programming port

• XCF04S Xilinx Platform Flash ROM to store FPGA configurations

• Large collection of I/Os including eight LEDs and four slide switches

• LCD and 7 segment displays

• RS 232 and VGA ports

• Ethernet port with physical layer controller

• User-selectable oscillator , plus a socket for a second oscillator

• 100 pin user I/O and peripheral module connection

FPGA Features :

• 100k gates.

• 108 I/Os.

• 72k Block RAM.

• 15k Distributed RAM.

• 240 CLBs.

Contents of Kit:

• 10 Video Session CD's
• VLSI Board
• USB Cable
• JTAG with Parellal Cable
• Software & Manual DVD containing software (Xilinx ISE), Schematics, Data Sheets ,User Manual, Example codes and other details to use the kit.
• Reference Book

Warranty: one year

Lead time: 3 working days

Price: Please ask for the quotation

How to order:http://www.emblitz.com/order.html

Contact Information:

Everest Infocom Pvt. Ltd.
#738/33, 12th main, 3rd block, Rajajinagar, Bangalore-560010, India
Phone : +91-80-2314 0344 Tele Fax: +91-80-2314 6229
Cell:+91 09986652733 +91 09449104615 +91 09980562847

order@emblitz.com
Visit: www.emblitz.com